

REMARKS

Upon entry of the present amendment, claims 3-6, 10, 11, 12, 14, 19, 21, 31-34 will have been amended. Additionally, withdrawn claims 1- 2, 7-9, 13, 22-30, and 35 are canceled without prejudice. Further, Applicant as submitted new dependent claims 36 and 37 for consideration by the Examiner.

Initially, Applicant would like to thank the Examiner for attaching the Notice of References Cited and PTO-1449 forms, the forms having been appropriately initialed by the Examiner to indicate consideration of the documents.

In the outstanding Official Action, the Examiner objected to claims 3-6, 11-12, 14, 19, and 34 for the recitation of "or", which the Examiner indicated makes the statement(s) following the recitation totally optional. The Examiner also objected to claim 34 for the recitation of "if", which the Examiner indicated makes the statement(s) following the recitation totally optional. The Examiner also objected to claims 3-6, 10, 14, 20-21, and 31 for the recitation "at least one", which the Examiner indicated means that only one of the limitations needs to be satisfied.

The Examiner rejected claims 3-6, 10, 14, and 31 under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. The Examiner also rejected claims 3-6, 10, 14, and 31 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The Examiner also rejected claims 3-6, 10, 14, 16-18, and 20-21 under 35 U.S.C. § 102(b) as being anticipated by KLEIN et al. (U.S. 6,397,227). The Examiner also rejected claims 15, 19, and 31-33 as being unpatentable under 35

U.S.C. § 103(a) as being unpatentable over KLEIN et al. in view of DUSTAN et al. (U.S. 5,884,312).

Applicant would like to thank the Examiner for his indication that claim 34 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph and to include all of the limitations of the base claim and any intervening claims.

Regarding the Examiner's objection to the recitations of "or" in claims 3-6, 11-12, 14, 19, and 34 as making the statement(s) following the recitation totally optional, Applicant intends the recitation to be in the alternative. Applicant refers the Examiner to MPEP § 2173.05(h) II, which indicates that alternative expressions using "or" are acceptable. Accordingly, Applicant requests the Examiner to provide support for his objection to the use of the term "or".

Regarding the Examiner's objection to the recitation of "if" in claim 34 as making the statement(s) following the recitation totally optional, Applicant intends the recitation to be conditional and contends that such recitation is not inappropriate. Nevertheless, Applicant has now replaced the term "or" with the term "when" which is clearly conditional.

Regarding the Examiner's objection to the recitation "at least one" in claims 3-6, 10, 14, 20-21, and 31, Applicant intends the recitation to include the singular and the plural; although, Applicant has removed the "at least one" recitation from claims 3-6, 10, and 31, for enhanced clarity. Further, Applicant submits that the use of "at least one" is well-accepted in patent law. Accordingly, should the Examiner persist in objecting to this term, Applicant respectfully

requests the Examiner to provide a basis for his objection to the use of the phrase "at least one".

Thus, in view of the foregoing, Applicant respectfully requests the Examiner to reconsider and withdraw his objections or provide support for his position that correction of the respective claims is required.

The Examiner rejected claims 3-6, 10, 14, and 31 under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Applicant respectfully traverses the Examiner's rejection.

The Examiner asserted that claims 3-6, 10, 14, and 31 do not list any hardware (i.e., computer) tied to the steps in order to operate the steps of the claims therefore resulting in only implementation and that claim 31 needs a processor for the code to perform its functionality. The Examiner also asserted that claims 3-6, 10, 14, and 31 do not specify an output at the end of the claim. While Applicant does not acquiesce in the Examiner's rejections, Applicant has amended claims 3-6, and 14. With respect to claims 10 and 31, Applicant submits that the respective output of the claims is the "rollback" which is recited therein.

The Examiner also asserted that claim 14 recites "for use" and "for performing" and suggested that such language be amended to recite "system implemented with an active" and "to perform". While Applicant does not acquiesce in the propriety of the Examiner's rejection with respect to claim 14, Applicant has amended claim 14 for enhanced clarity and to advance prosecution.

Contrary to the Examiner's assertions, Applicant submits, if the method recited in the pending claims is statutory (which is shown below), it is immaterial whether any hardware is listed (i.e., recited).

Applicant submits that claims 3-6, 10, 14, and 31 are indeed directed to statutory subject matter when the claims are considered in view of the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" set forth in the Official Gazette of the United States Patent and Trademark Office, dated November 22, 2005 (Volume 1300, Number 4) (hereinafter referred to as the "Guidelines").

The following passages from the Guidelines describe the current standards for statutory subject matter:

To be eligible for patent protection, the claimed invention as a whole must be useful and accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F. 3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998).

....

To be statutory, a claimed process must either: (A) result in a physical transformation for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application which produces a useful, tangible, and concrete result. See *Diehr*, 450 U.S. at 183-84, 209 USPQ at 6.

....

For eligibility analysis, physical transformation "is not an invariable requirement, but merely one example of how a mathematical algorithm [or law of nature] may bring about a useful application." *AT&T*, 172 F.3d at

1358-59, 50 USPQ2d at 1452. If the examiner determines that the claim does not entail the transformation of an article, then the examiner shall review the claim to determine if the claim provides a practical application that produces a useful, tangible and concrete result.

Thus, according to the Guidelines, to be statutory the claims must either (a) result in a physical transformation for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (b) be limited to a practical application which produces a useful, tangible, and concrete result.

Thus, by failing to explain how the claims do not produce a useful, tangible, and concrete result, the Examiner has failed to establish a *prima case* of unpatentability.

The Guidelines explicitly state that “[t]he burden is on the USPTO to set forth a *prima facie* case of unpatentability. Therefore if the examiner determines that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, the examiner must provide an explanation.” By only asserting that the claimed invention does not list any hardware (i.e., computer) tied to the steps in order to operate the steps of the claims therefore resulting in software only implementation, the Examiner has failed to consider and explain how the claimed invention as whole does not produce a useful, tangible and concrete result. Therefore, the Examiner has failed to properly establish a *prima facie* case of unpatentability, and the rejection should be withdrawn for at least this reason.

Even assuming *arguendo* that the Examiner has properly established a *prima facie* of unpatentability, which Applicant does not concede, Applicant submits that claims 3-6, 10, 14, and 31 are directed to statutory subject matter because they do produce a useful, tangible and concrete result as described below.

Useful Result

The guidance for the "useful result" prong of the §101 inquiry is provided by the following passage

For an invention to be "useful" it must satisfy the utility requirement of section 101. The USPTO's official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP Sec. 2107... (Guidelines at Section IV).

Furthermore, the Examiner's attention is directed to MPEP §2107, which provides the following examination guidelines for the utility requirement

Office personnel are to adhere to the following procedures when reviewing patent applications for compliance with the "useful invention" ("utility") requirement of 35 U.S.C. 101 and 112, first paragraph.

(B) Review the claims and the supporting written description to determine if the applicant has asserted for the claimed invention any specific and substantial utility that is credible:

(1) If the applicant has asserted that the claimed invention is useful for any particular practical purpose (i.e., it has a "specific and substantial utility")

and the assertion would be considered credible by a person of ordinary skill in the art, do not impose a rejection based on lack of utility.

Applicant submits that the instant claimed invention complies with the above-noted provisions of MPEP §2107 because it is useful for a particular purpose, *i.e.*, online rollbacks in an application database. Accordingly, the claimed invention provides a useful result in terms of the §101 analysis.

Tangible Result

The guidance for the "tangible result" prong of the §101 inquiry is provided by the following passage from the Guidelines:

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a Sec. 101 judicial exception, in that the process claim must set forth a practical application of that Sec. 101 judicial exception to produce a real-world result. ... "[A]n application of a law of nature or mathematical formula to a . . . process may well be deserving of patent protection." *Diehr*, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also *Corning*, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 ("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted ..."). In other words, the opposite meaning of "tangible" is "abstract."

Applicant submits that independent claims 3-6, 10, 14, and 31 each, as whole, produce a tangible result. That is, claims 3 and 4 recite methods of

rollbacking a table of an active database. Claims 5 and 6 recite methods of rollbacking a row in a table of an active database. Claim 10 recites a method of rollbacking a transaction id set in a plurality of tables of an active database. Claim 14 recites a system implemented with an active database. Claim 31 recites a method of rollbacking transactions made in a user session in a plurality of tables of an active database. Accordingly, the claimed invention provides a tangible result in terms of the §101 analysis.

Concrete Result

The guidance for the "concrete result" prong of the §101 inquiry is provided by the following passage from the Guidelines:

Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. In other words, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. In re Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is "irreproducible" claim should be rejected under section 101). The opposite of "concrete" is unrepeatable or unpredictable.

Applicant submits that independent claims 3-6, 10, 14, and 31 each, as whole, produce a concrete result. As noted above, the noted claims recite methods for online rollbacks in an application database, which are repeatable for the same input variables. Therefore, Applicant submits the methods recited in

the claims produce a result that is substantially repeatable. Accordingly, the claimed invention provides a concrete result in terms of the §101 analysis.

For at least the above-described reasons, Applicant submits that the claimed invention as a whole is directed to statutory subject matter because it produces a useful, tangible, and concrete result. Accordingly, Applicant respectfully requests that the rejection over claims 3-6, 10, 14, and 31 under 35 U.S.C. §101 be withdrawn.

With respect to the Examiner's rejections of claims 3-6 and 10 under 35 U.S.C. § 112, second paragraph, the Examiner indicated that the recitation "enabling" does not mean that the step is being accomplished and that it suggests a capability, but not necessarily an occurrence. Applicant notes one meaning of the verb form of "enable" is "to activate", see Dictionary.com. The American Heritage® Dictionary of the English Language, Fourth Edition, Houghton Mifflin Company, 2004.

<http://dictionary.reference.com/browse/enabling> (accessed: October 31, 2006).

Thus, Applicant submits that the recitation "enabling" is in fact definite.

Further, according to MPEP § 2173.02, the test for definiteness under 35 U.S.C. 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) the content of the particular application disclosure; (B) the teachings of the prior art; and (C) the claim interpretation that

would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

Applicant submits that the recitation "enabling" is sufficiently described in the specification such that a person skilled in the art would understand what the claimed invention is when the claims are read in light of the specification. Thus, Applicant submits one ordinarily skilled in the art reviewing the original disclosure and pending claims would understand the instant invention and readily ascertain the scope of the invention. Therefore, Applicant submits the instant rejection is improper.

Thus, Applicant traverses the Examiner's rejection under 35 U.S.C. § 112 and submits that the Examiner is incorrect.

With respect to the Examiner's rejections of claims 3-6, 10, 15, and 19 under 35 U.S.C. § 112, second paragraph as being vague and indefinite, Applicant has amended claims 3-6, 10, and 19 for enhanced clarity, but do not acquiesce in the propriety of the Examiner's rejections. With respect to claims 3-6, 10, and 31, Applicant has amended the term "all related integrity constraints" to "associated referential integrity constraints". Further, Applicant submits that one of ordinary skill in the art would understand the meaning of the recited term with or without the amendment. Nevertheless, Applicant has amended claims 3-6, 10, and 31 for enhanced clarity and in order to advance prosecution. With respect to claim 15, Applicant submits that one of ordinary skill in the art would understand the term "fields associated with a user session" in the context of a

database application. Lastly, Applicant has amended claim 19 to more clearly recite the feature of a login trigger and a logout trigger.

With respect to the Examiner's rejections of claims 4, 6, 11, 12, 14, 21, 32, and 34 under 35 U.S.C. § 112, second paragraph for insufficient antecedent basis, Applicant has amended claims 4, 6, 11, 12, 14, 21, 32, and 34 for enhanced clarity, but do not acquiesce in the propriety of the Examiner's rejections. Further in this regard, Applicant has amended claim 33 for enhanced clarity.

Regarding the Examiner's rejections with respect to claims 3-6, 10, 14, 16-18, and 20-21 under 35 U.S.C. § 102(b) as being anticipated by KLEIN et al., Applicant asserts that the disclosure of KLEIN et al. is deficient. KLEIN et al. is directed to a database management system including an execution engine that, upon rollback of an aborted transaction, has the ability to set fields of the rows that are updated or deleted by the transaction prior to aborting. When a select, update or delete statement includes a "set on rollback" clause, the respective table access operator of the execution engine modifies the "before image" of each row that is stored by a transaction log manager (col. 2, line 61 - col. 3, line 1). Thus, KLEIN et al. is limited to rollbacks of aborted transactions and notably lacks the ability to rollback data to any point-in-time.

In KLEIN et al., if a transaction associated with the statement aborts, when the transaction log manager restores the before images of each row that was deleted or updated by the transaction, the restored before images include the field updates specified by the set on rollback clause. However, KLEIN et al. fails

to disclose rollbacking a table of an active database to a point-in-time, as recited in claims 3 and 4. Clearly, rollbacking a table of an active database to a point-in-time is distinct from restoring before images of each row associated with an aborted transaction.

Further, KLEIN et al. fails to disclose a before image table and an after image table, as recited in claims 3, 4, 5, 6, 10, 14, and 31. In fact, KLEIN et al. never mentions a before image table or an after image table.

Yet further, KLEIN et al. fails to disclose retrieving a retention time for a table, as recited in claims 3, 4, 5, 6, 10, and 31. KLEIN et al. discloses a transaction log manager 500 that maintains a log 502 of every database record (row) update, insert and delete made by any transaction (col. 22, lines 11-13). However, KLEIN et al. does not contemplate, disclose, or mention a retention time for a table. KLEIN et al. does disclose a range of keys for the table access operator (col. 12, lines 20-21); however, the keys are index values of rows that have been modified by an identified transaction (col. 9, lines 54-55) and are not the equivalent of a range of keys.

KLEIN et al. also fails to disclose the disabling and enabling of referential integrity constraints, which is recited in claims 3, 4, 5, 6, 10, and 31. KLEIN et al. discloses a transaction that may lock a row to ensure that the values in the row do not change until the transaction completes, or because the contents of the row have been modified but not yet committed (col. 10, lines 60-66). Also, in KLEIN et al., when a transaction commits, the transaction releases the row locks on the rows that the transaction has updated or inserted, and by releasing the

row locks, the changes to the database are committed and made available to other transactions (col. 12, lines 48-52). Additionally, KLEIN et al. describes a row lock in context of the stream select process, but not in context of a rollback of an aborted transaction. However, KLEIN et al. fails to disclose the disabling or enabling of referential integrity constraints, which is recited in claims 3, 4, 5, 6, 10, and 31.

KLEIN et al. also fails to disclose retrieving an earliest starting time of the transaction id set, as recited in claim 10. KLEIN et al. does disclose a scan list; however, the scan list is temporarily held until the completion of a stream select process and will not exist for rollback operations at a later time (i.e., after the stream select process). Thus, the scan list of KLEIN et al. cannot be a source of an earliest starting time of the transaction id set.

With respect to claim 14, KLEIN et al. fails to disclose a retention time field, as recited in claim 14. The Examiner is respectfully requested to identify the portion of the disclosure in KLEIN et al. that teaches a retention time field. Further, KLEIN et al. employs a transaction log rather than a plurality of user application after image tables, wherein each of the tables has one before image table to store before images, and one after image view, as recited in claim 14. Still further, KLEIN et al. passes images to a transaction log manager for storage in a transaction log, rather than an image manager that creates image views, as recited in claim 14.

With respect to claim 31, the Examiner correctly noted that KLEIN et al. fails to disclose retrieving a starting time, an ending time, and a unique session id

of the user session. Instead, the Examiner relied on DUSTAN et al. to supply the admitted deficiencies of KLEIN et al. The Examiner provides no motivation or suggestion to make the claimed combination, which must be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir.). KLEIN et al. fails to provide such a teaching or suggestion.

Further, KLEIN et al. is directed to a database management system that includes an execution engine that, upon rollback of an aborted transaction, has the ability to set fields of rows that are updated or deleted by the transaction prior to aborting. DUSTAN et al. is directed a system and method for securely accessing information from disparate data sources through a network, in which the user does not log into a database and the system does not record database transactions, but is merely limited to recording high level activities. While DUSTAN et al. discloses a database server that receives a session identification number and account information and includes a database management system that executes a first function stored procedure in response to a script of a network server (col. 3, lines 53-57), DUSTAN et al. does not pertain to a user session in a table of an active database, as recited in claim 31. Thus, Applicants submit that the disclosure of DUSTAN is lacking and fails to compensate for the deficiencies of KLEIN et al.

Even if KLEIN et al. could be combined with DUSTAN et al., which Applicants dispute, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also

suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ 2d 1430 (Fed. Cir. 1990). KLEIN et al. fails to suggest such a desirability.

Applicants submit that the Examiner has improperly combined KLEIN et al. with DUSTAN et al. Furthermore, there is no suggestion or disclosure in the references relied upon by the Examiner, separately or in any proper combination, that render obvious the features of claim 31.

Thus, none of the references relied upon by the Examiner, either alone or in any proper combination, teach or suggest such features, in the claimed combinations.

Applicant notes that claims 3-6, 10, 11, 12, 14, 19, 21, 31-34 have been amended and new dependent claims 36 and 37 have been added for consideration by the Examiner. Applicant notes that dependent claims 36 and 37 add no prohibited new matter and recite elements not taught by the prior art. Applicant reserves the right to file a continuing application as to withdrawn and now canceled claims 1- 2, 7-9, 13, 22-30, and 35. Applicant submits that claims 3, 4, 5, 6, 10, 14, and 31 are in condition for allowance.

With regard to dependent claims 11, 12, 15-21, 32-34, and 36-37, Applicants assert that they are allowable on their own merit, in addition to being allowable by depending either directly or indirectly from independent claims 10, 14, or 31, which Applicants have shown to be allowable.

Thus, in view of the above arguments, Applicants submit that claims 3-6, 10-12, 14-21, 31-34, and 36-37 are in condition for allowance. Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding

rejections of the claims, as well as an indication of the allowability of each of the claims in view of these remarks.

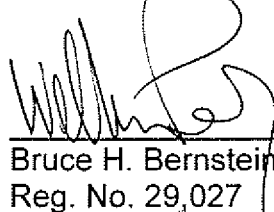
SUMMARY AND CONCLUSION

Applicants submit that the present application is in condition for allowance, and respectfully request an indication to that effect. Applicants have argued the allowability of the claims with respect to the cited prior art. Accordingly, reconsideration of the outstanding Official Action and allowance of the present application and all claims pending herein are respectfully requested and are now believed to be appropriate.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

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